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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,563

09/12/2003

Katsumi Fujimoto

36856.1124

5318

7590

09/15/2004

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EXAMINER

CHAPMAN JR, JOHN E

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/660,563

Applicant(s)

FUJIMOTO, KATSUMI

Examiner

John E Chapman

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/12/03; 3/15/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The disclosure is objected to because of the following informalities: Page 6, last line, “vending” should be changed to --bending--.

Appropriate correction is required.

2. Claim 13 is objected to because of the following informalities: In claim 13, --bodies-- should be inserted after “vibrating” in line 2. Appropriate correction is required.

3. The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, first and/or second paragraph, as failing to comply with the written description requirement (that the specification be written in “full, clear, concise, and exact terms”) and/or as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what is meant by “both ends free in the thickness direction Y of the vibrating bodies” on page 6, last two lines, and in claim 1, line 5. It is not clear that the vibrating bodies 13 have ends that are “free.” Both end portions of the vibrating bodies 13 are joined together by intermediate parts 2 and thereby are not “free.” Furthermore, the end portions are attached to supporting parts 10 in Fig. 1 (and support pins 21 in Fig. 6) and thereby are not

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“free.” Rather the end portions of the vibrating bodies 13 appear to be fixed in order to form nodes, as illustrated in Fig. 4C. Note page 7, lines 1-2.

5. Claims 7, 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7, it is not clear that the magnitude of the secondary bending vibration is detected by separated electrodes on the outside surface of one vibrating body and a fully extended electrode on the outside surface of the other vibrating body. Such an arrangement is not illustrated in any of the drawings. Note the drawings do not show the differential circuit 14 connected to a separated electrode on one outside surface and a fully extended electrode on the other outside surface.

Regarding claim 11, there is no antecedent basis for “the drive electrode and the detection electrode” in lines 1-2. It is not clear whether applicant intended claim 11 to depend upon claim 10 for antecedent basis. Likewise for claim 12.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4-6, 8, 9, 12, 13, 17 and 18, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Fugimoto (JP 08-292033 and JP 10-307029).

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Fugimoto discloses a Vibrating gyroscope comprising a vibration including a pair of vibrating bodies, a driver for vibrating the vibrating bodies in opposite directions, and a detector for detecting the magnitude of secondary bending vibrations of the vibrator.

8. Claims 1-3, 5-6, 9-11, 15-17, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Ishitoko et al.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 14, 19 and 20, as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishitoko et al.


Regarding claim 14, the only difference between the claimed invention and the prior art consists in providing a driver with automatic gain control. It is well known in the art to provide a driver with automatic gain control in order to provide a stable drive signal.

Regarding claims 19 and 20, the only difference between the claimed invention and the prior art consists in providing a plurality of vibrating gyroscopes on a plane. It would have been obvious to provide a plurality of vibrating gyroscopes on a plane in order to provide redundancy and in order to provide a more accurate signal.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John E Chapman  
Primary Examiner  
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